

DETAILING GENETIC CONTROL OF CANCER



THE UNIVERSITY OF
NEWCASTLE
AUSTRALIA

DR HEATHER LEE

Harnessing powerful sequencing methods to study cancer cells that survive treatment and cause relapse.

Dr Heather Lee leads an innovative research program within the School of Biomedical Sciences and Pharmacy. Using single-cell sequencing technologies, Dr Lee's team has shown that some blood cancer cells evade the effects of epigenetic therapies by altering cellular metabolic processes. Excitingly, this research suggests that patients may benefit from combining epigenetic therapies with common cholesterol-lowering medications.

COMPETITIVE ADVANTAGE

- Unique methods for parallel analysis of DNA methylation, gene expression, and copy number variants in single cells and low-input samples
- Assays to test the ability of cancer cells to drive relapse
- Comprehensive capabilities in pre-clinical cancer models, sequencing technologies, and data analysis.

PARTNERS

- Hunter New England Health
- Hunter Medical Research Institute
- The University of Melbourne.

SUCCESSFUL RESEARCH APPLICATION

- Development of cost-effective sequencing methods for analysis of DNA methylation in single cells
- Advanced computational analyses to integrate single-cell multi-omic data
- Identification of a promising co-treatment strategy that may delay relapse in people living with Acute Myeloid Leukaemia.

MORE INFORMATION

Dr Heather Lee

T: +61 2 4042 0680

E: heather.lee@newcastle.edu.au

